

Caledonian Canal Fact File



The Caledonian Canal links the natural lochs and firths of the Great Glen together like a string of pearls.



www.wow4water.net

Crunch time...



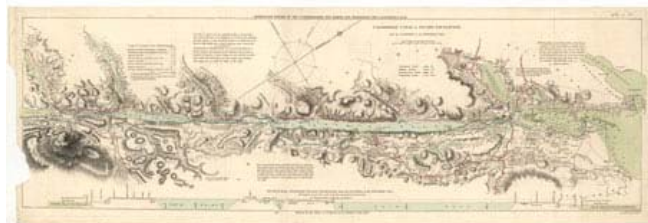
Strange as it may seem to you this day, the time will come, and it is not far off, when full-rigged ships will be seen sailing eastward and westward by the back of Tomnahurich.



A real prediction, or a clever guess by looking at the landscape? You decide!

It is hard to imagine the landscape in Scotland being formed today – everything looks as though it has been the way it is now for ever. But this is far from the case...

It is 400 million years ago. Two great land masses, once separated by sea, crash together. The future Highlands and Lowlands of Scotland grind against each other in two different directions. As they do so, ridges and mountains are pushed up in the landscape, and the Great Glen is formed between them.



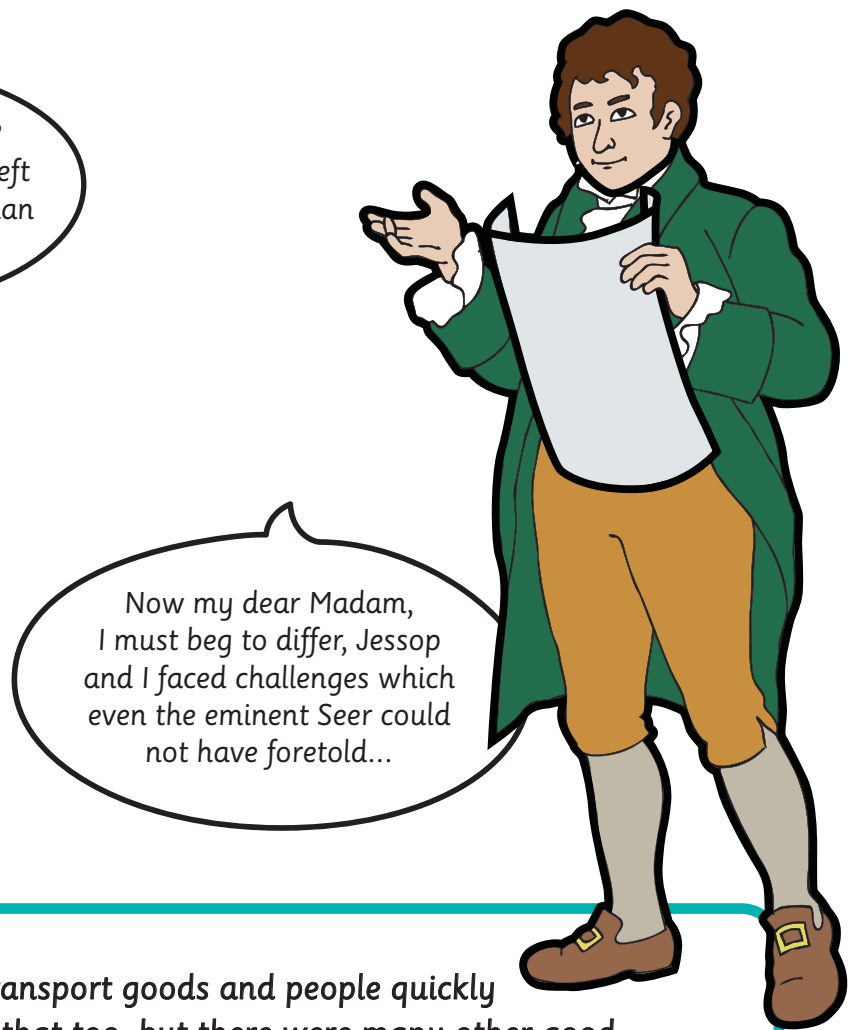
The canal route which connected east and west from sea to sea across the Highlands was surveyed by Thomas Telford to make sure it was feasible.

This long, narrow Glen holds a chain of lochs and as we come to the most recent few hundred years, a road that winds from sea to sea. The road links Fort William in the West and Inverness in the East, but travelling by road across Scotland in the early days is a slow, miserable, risky business. Mud and bad surfaces make it difficult for walkers and riders alike. But in 1620 the legendary Brahan Seer, Coinneach Odhar (Con-ee-ach Oor, 'dun-coloured Kenneth') predicts a safer, faster journey using the lochs and rivers to be found in the Glen.

The **Great Glen** is still an active geological fault and there are frequent minor tremors, with a **real earthquake** leaving a crack running up the canal towpath in 1901.

**Strange
but True**

Telford's triumph?



Most canals anywhere were built to transport goods and people quickly and safely. The Caledonian Canal did that too, but there were many other good reasons for starting the project...

In 1793 Thomas Telford, the great Scots engineer, surveys the route for the Caledonian Canal. This will link together the east and west coasts through the Great Glen's chain of lochs. Is he influenced by the Brahan Seer's spookily accurate prophesy? Possibly, but the survey he undertakes is scientific and makes sure the Great Glen will work as a canal route. The canal is only part of his ambitious project to modernise the Highlands with new bridges, roads and harbours too.

Telford's survey report gives several good reasons for building the Caledonian Canal:

- it will save lives by helping ships to avoid the dangerous Pentland Firth route around Scotland
- it will give East Coast fishing fleets easy, direct access to the rich fishing-grounds of the West Coast and vice versa
- it will provide work for many people and make the Highlands richer.





The Highland Clearances drove entire communities from their homes and lands.

Telford has seen the suffering that Highlanders face in the aftermath of the Battle of Culloden. There, in 1746, a force loyal to the English King George II savagely defeated Prince Charles Edward Stuart's nationalist Jacobite army. As a result, many young Highlanders are leaving Scotland for America and Australia. Telford wants to keep young talent in Scotland with what is a massive canal-building job-creation scheme.

But behind the fine words, is the canal really being built for secret military reasons, to allow troop movement in case there is another Highland rebellion? Or to subdue a possible French invasion? Rumours multiply. But there is no word of this in Telford's survey and in any case, navy ships soon grow too big to use his Caledonian Canal.

Strange but True

Telford estimates the cost of the canal at **£350,000**, and predicts that it will take seven years work - and Parliament gives him the go-ahead.

It in fact **opens eighteen years later** on October 23rd 1822 at a **cost of £921 000**.



Dig this...



Most complex building projects today will involve sophisticated computers and heavy machinery. But is it really progress? Could modern engineers now work as Telford and his team in the late eighteenth century, when they understood every aspect of the work, and calculated and excavated everything by hand?

No-one could have predicted what a long, hard task the construction of the Caledonian Canal would be. 60 miles [96.5km] long, it connects 38 miles [61km] of loch with sections of canal. At its highest, at Loch Oich, the canal is 106 feet [32m] above sea level. The lock flights constructed to cater for this rise are deep and broad. It means digging out ton upon ton of soil. At Bught and Dalneigh, huge banks of earth build up low-lying land and would last into the twenty-first century.

Unlike other canals in the UK and in southern Scotland which relied solely on imported 'navvy' workers from Ireland and elsewhere, the Caledonian Canal is built using many more local people. But the crofting canal workers have divided loyalties and drive the engineers mad by disappearing back to their homes - to help with the harvest, for example.

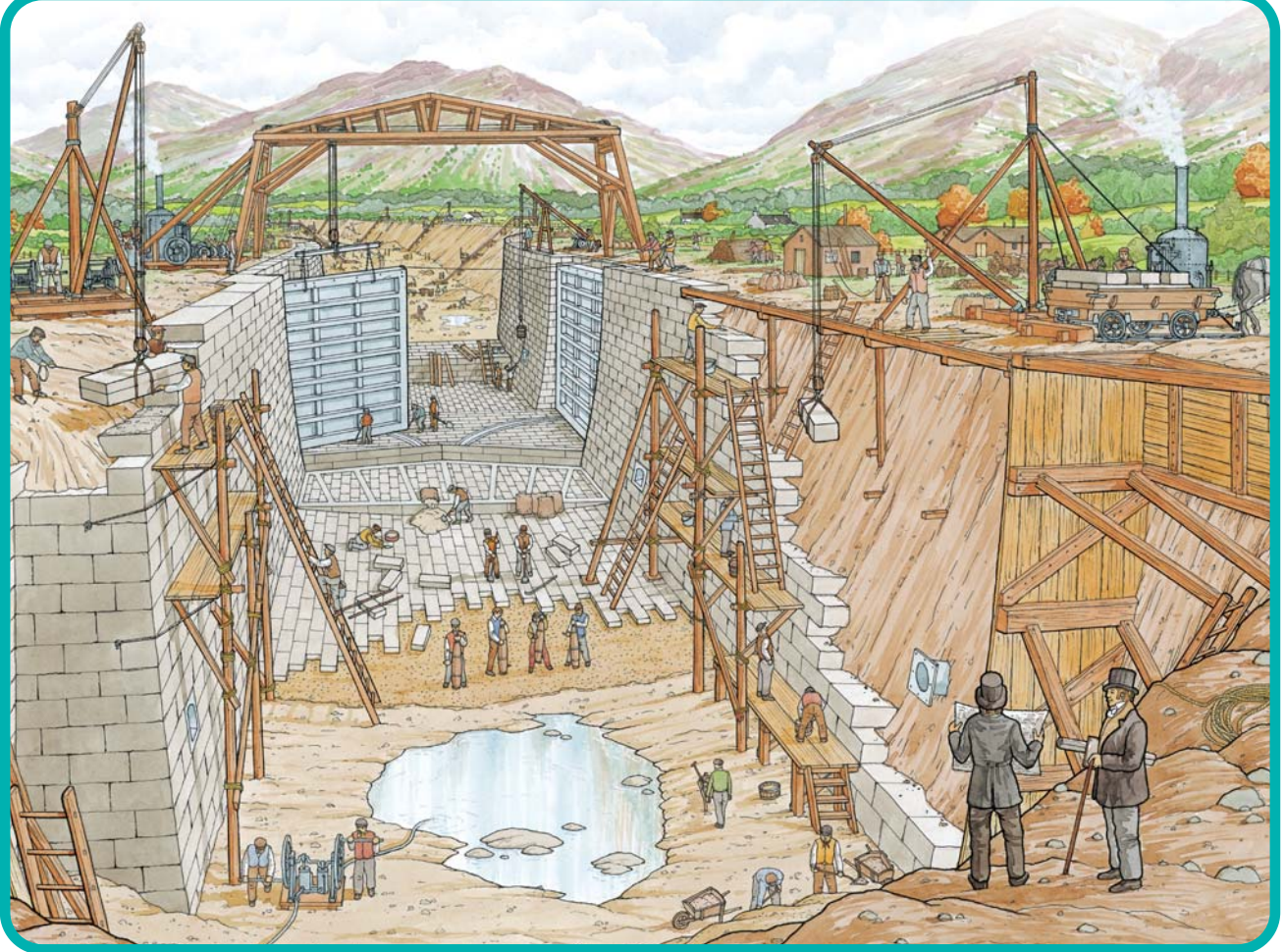
Drinking is a constant problem. Unsurprisingly, the dairy Telford's assistant, William Jessop builds to convert his workforce to milk meets with very little success.



Crofting was a hard life, and extra income from canal work must have been very welcome.

The Canal is excavated by hand, not by machine. The great East Coast canal basin at Muirtown is dug out by 130 men with shovels and wheelbarrows. Work on the canal is nearly halted in 1819 when Parliament protests at how much the project is costing and how long it is taking. If this happens, the Canal will begin in Inverness but end, pointlessly, in Fort Augustus! Grudgingly another year and a bit more money are allowed, and eventually the Canal opens in 1822.

The completed Canal is proof of the bravery, skill and endurance of many hundreds of Highlanders.



Lock construction is a particularly hard task, and the canal workers had no heavy lifting machinery to help.

Railways are built to **help bring the soil out** of the canal cutting, with wagons pulled not by trains (which have yet to be invented) but by **long-suffering horses**.

Strange
but True

Changing cargoes



All this effort, and you've stopped using the canal! Why?



Aye, the Canal's just fine, but it costs me, and the locks are that slow. I've a fine new boat, and I can round Cape Wrath and Duncansby Head quicker now, with the new lighthouses to keep me off the rocks. I ken there's still a risk, but I'll take it - and keep the profit!

Many canals have been threatened with closure: some have actually closed. This has never happened to the Caledonian Canal, which has always managed to adapt to changes in use, even when those for whom the canal was originally built turned their backs.

When Telford starts building the Caledonian Canal in 1804, these waterways are the most modern means of transport there is. But by 1822, engineers like George Stephenson are already experimenting with steam power and only seven years later, he launches the first steam train, the Rocket.

As the railways spread, it seems logical to have an east-west rail link through the Great Glen running beside the canal, but it never happens. The only section of railway ever to be completed (between Spean Bridge and Fort Augustus) cannot survive without that last vital stretch to Inverness, and closes in 1946.

For over a hundred years, the Caledonian Canal stays the main way to carry goods across the Scottish Highlands from East to West. Nineteenth century cargo listings show pigs, cattle and sheep, coal and timber, herring, manure, barrels of eggs, roof slates - even gunpowder.

HARBOUR, WHARF, AND BASIN DUES.		
1. On all Goods discharged, landed, or put into Lighters from or loaded into any Ship, Boat, or Vessel, of whatever description (with the exception hereinafter mentioned) lying in any of the Harbours or Basins, or at any of the Wharfs, Piers, Jetties, or Landing Places on the line of the Canal or connected therewith (Muirtown Basin excepted), Dues to be levied at the Rates specified for the several Articles enumerated in the following Schedule:—		
Description of Goods.	Quantity.	Rate.
Ale, Beer, and Porter	Imperial measure.	s. d.
Bark	Per Barrel Bulk	0 2
Birch or Alder Staves	Per Ton	0 6
Bones, Boneoil, and Guano	Per 1000	0 2
Butter and Cheese	Per Ton	0 8
Cement	Per Stone	0 1
Chalk	Per Ton	1 0
Cloths, Carpeting, Haberdashery, & Hosiery	Per Barrel Bulk	0 3
Coals, Coke, or Cinders	Per Ton	0 2
Copper, Zinc, Brass, Lead, Tin	Per Cwt.	0 1
Cotton Wool	Per Ton	1 0
Crystal, China, and Earthenware	Per Barrel Bulk	0 2
Eggs	ditto	0 2
Empty Herring Barrels or Boxes	Each	0 0½
Other Empty Casks in proportion to size.		
Feathers	Per Cwt.	0 2
Fish—Salmon in Kibs or Boxes	Per Barrel Bulk	0 3
Herrings, packed	Per Barrel	0 2
Other Fish	Per Box	0 1½
Flour	Per Sack	0 2
Fruit	Per Barrel Bulk	0 2
Grain—Wheat	Per Quarter	0 2
All other kinds	ditto	0 1
Groceries	Per Barrel Bulk	0 2
Gunpowder	Per Cwt.	0 3
Hardware	Per Barrel Bulk	0 2
Hay and Straw	Per Ton	0 6
Hemp, Flax, or Tow	Per Cwt.	0 1
Hides	ditto	0 1
Horns of Wood	Per 100	0 0½
Horns and Hoofs	Per Cwt.	0 1
Household Furniture	Per Barrel Bulk	0 2

Description of Goods.	Quantity.	Rate.
Husbandry Utensils	Imperial Measure.	s. d.
Iron Castings	Per Barrel Bulk	0 2
Iron Cables	Per Cwt.	0 1
Iron Wire	ditto	0 1
Kelp	Per Ton	0 4
Leather	Per Cwt.	0 1
Lime	Per Ton	0 4
Loam, Pipe and Fire Clay	Per Ton	0 3
Machinery	Per Barrel Bulk	0 3
Manure, Common	Per Ton	0 2
Meal	Per 140 Lbs.	0 1
Metallic Ores	Per Ton	0 6
Oil—Fish or Vegetable	Per Barrel Bulk	0 3
Peas or Turf	Per 1000	0 2
Potatoes	Per Ton	0 4
Rags	Per Cwt.	0 0½
Rape or Linseed Cakes	Per Ton	0 6
Ropes, Cordage, Netting and Canvas	Per Ton	0 2
Salt	Per Ton	0 6
Sand—Soil and Gravel	ditto	0 1
Seeds—in Bags or Casks	Per Barrel Bulk	0 2
Skins	Per Dozen	0 1
Slates, Bricks, and Tiles	Per 1200	0 0½
Soap, Soda, and Saltpetre	Per Cwt.	0 0½
Spirits—Foreign or Colonial	Per Gallon	0 0½
British	Per Ton	1 0
Steel and Iron—Bar or Pig	ditto	0 2
Stones—for Building or Paving	Per Ton	0 6
Flagstones, Millstones, Grindstones	Per Hothead	0 6
Sugar	Per Barrel	0 2
or Tierce	Per Barrel Bulk	0 2
Tallow and Grease	Per Barrel	0 2
Tar and Pitch	Per Load	0 6
Timber	Per Barrel Bulk	1 0
Wine—in Casks	ditto	0 6
in Bottles	Per Stone of 24 Lbs.	0 0½
Wool		

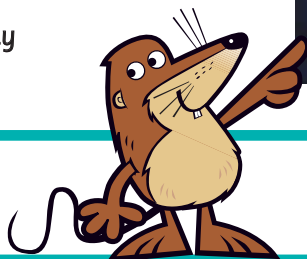
Increasingly, too, passengers are choosing the new and speedy canal steam launches as their way of crossing Scotland. Both passengers and boat owners pay for their canal use, but it is better than a bumpy and uncomfortable ride by cart or coach and horses. The canal steam boats do not need a favourable wind and can sail in most weathers.

Gradually the roads improve. In the twentieth century, between the wars, motor transport begins to replace use of the canal. Fortunately, the Caledonian Canal is one of the most spectacular canal settings on earth and as cargo vessels became scarcer, there is a slow increase in pleasure-boat traffic.

By the new millennium, the Caledonian Canal's number one cargo is people: both local boat-owners and visitors to the Scottish Highlands enjoying a boat trip.



A lock-keeper sees the boats safely through the locks at Banavie.



Fishing-boat captains in the nineteenth century do not always use the canal as **Telford had hoped.**

They sometimes still prefer the **riskier** - but **cost free** - route around the north coast of the Highlands.

Strange
but True

Find out more about Caledonian Canal cargoes via our free Great Caledonian Canal Resource kit, available for loan to Highland Schools. Telephone 01463 725 500 or visit www.water4water.net for more information and other resources to download.

Always remember to stay **SAFE** near water – Stay Away From the Edge.